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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/361,372	07/26/1999	JOEL M. SODERBERG	MS1-391US	5437

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EXAMINER	
LUDWIG, MATTHEW J	

ART UNIT	PAPER NUMBER
2178	

DATE MAILED: 04/09/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/361,372	SODERBERG ET AL.	
	Examiner	Art Unit	
	Matthew J. Ludwig	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 January 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *24 January 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This action is responsive to communications: amendment filed January 24, 2003.

2. Claims 1-33 are pending in this case. Claims 1, 14, 24, 30 are independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 10-13, 30 & 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norman Walsh, 'Understanding XML Schemas', July 1, 1999 in view of Aoyama et al., US Patent Number 5,956,726 filed (6/3/96)

In reference to independent claim 1, Walsh discloses:

- publication models within schemas, which are described in terms of constraints. A constraint defines what can appear in any given context. The reference further discloses a content model constraint, which describes the order and sequence of elements (compare to "*associating, receiving an XML data stream...*"). See Walsh, page 2 of 12. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the proposed methods of constraints as taught by Walsh for evaluating incoming XML data stream against a given schema and associating the constraints with at least one schema requirement or rule to provide a well-formed schema structure.

- Walsh further discloses a schema, which describes a model for a whole class of documents. The model describes the possible arrangement of tags and text in a valid document.

Models are described in terms of constraints. A constraint defines what can appear in any given context. It is these ***constraints*** that perform similar techniques as ***states*** being associated with individual elements (compare to "defining a plurality of states, individual states being associated with individual elements of an XML data stream"). See Walsh, pages 1-4. Constraints also are defined within a schema and just as individual states are associated with individual elements of an XML data stream, so too are the defined constraints. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have utilized the constraint techniques as disclosed in Walsh for ***evaluating*** the ***XML data stream*** against ***at least one*** rule for an element, which would have provided a proficient parsing process.

- Walsh does not explicitly disclose a technique for disregarding associated portions of the XML data stream if any rules are violated. However, Aoyama discloses a method for structured document difference string extraction. Extracting the difference between the structured documents in such a manner as to satisfy the comparison criterion in accordance with the result of parsing of the structured documents. See column 3, lines 47-67. The comparison criterion includes tags indicating logical structures and types of comparison criterion corresponding to the tags. Tags having the contents the difference of which is ***ignored at the time of comparison*** (ignoring tags). This technique discloses similar methods for ignoring such data within documents within an extraction process.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the constraint methods associated with XML schema as taught by Walsh with the tag ignoring means of Aoyama to provide a proficient framework for streamlining and parsing XML data streams.

In reference to dependent claim 2, Walsh discloses:

In the context of XML, a schema describes a model for a whole class of documents. The model describes the possible arrangement of tags and text in a valid document. In schemas, models are described in terms of constraints. See Walsh, pages 1 & 2. The constraints disclosed by Walsh would have provided a proficient technique for associating at least one rule related to a schema of the XML data stream as similar techniques are demonstrated utilizing constraint methods.

In reference to dependent claim 3, Walsh discloses:

A schema is a model for describing the structure of information. The model describes the possible arrangement of tags and text in a ***valid*** document. See Walsh, pages 1 – 4. The validation process is a well-known process performed by markup language parsers. The employment of a well-known validator is to detect well-formed layers of elements nested within a documents structure. It would have been an obvious to one of ordinary skill in the art at the time the invention was made to have utilized a validator to perform the similar tasks of tracking at least one state or layer of an XML data stream and evaluating the XML data stream against ***one schema-based rule***.

The purpose of a schema is to allow machine validation of document structure. The utilization of validator techniques would have provided similar results after evaluating an XML data stream against at least on schema-based rule. See Walsh, pages 1-3.

In reference to dependent claim 4, Walsh discloses:

In schemas, models are described in terms of constraints. A constraint defines what can appear in any given context. There are basically two kinds of constraints that you can give:

content model constraints describe the order and sequence of elements and datatypes. See Walsh, pages 1-3. The constraints taught by Walsh provide a similar method of tracking at least one state of an element or data type. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have associated the constraints with at least one request type defining a specific element, because it would have provided a well-structured tracking process.

In reference to dependent claim 10, Walsh discloses:

In schemas, models are described in terms of constraints. A constraint defines what can appear in any given context. See Walsh, pages 1-3. The ***constraints*** defined within the given schema provide similar techniques as ***rules*** and would provide a proficient method for defining ***one specific rule*** related to one specific element's contents.

In reference to dependent claim 11, Walsh discloses:

In schemas, models are described in terms of constraints. A constraint defines what can appear in any given context. See Walsh, pages 1-3. The ***constraints*** defined within the given schema provide similar techniques as ***rules*** and would provide a proficient method for defining one specific rule related to one specific element's contents.

In reference to dependent claim 12, the limitation of this claim repeats similar limitations as independent claim 1, and is rejected under the same rationale.

In reference to dependent claim 13, the limitation of this claim is the computer program for carrying out the method of claim 1, and is rejected under the same rationale.

In reference to claims 30 & 31, the limitations of these claims are the system for carrying out the methods of claims 1 & 2, and are rejected under the same rationale.

5. Claims 14-17, 23-27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham et al., US Patent Number 6,411,974 filed (2/4/98) in view of Aoyama et al., US Patent Number 5,956,726 filed (6/3/96)

In reference to independent claim 14, Graham discloses:

An opening module for opening the textual streams and an extraction module for extracting the desired contents from the textual streams (compare to "*defining a schema module that is associated with an HTTP request type that is received from a client, the schema module having a function that determines whether...*"). See column 2, lines 50-65. Graham further discloses data structures, which comprise parse rules associated with the textual streams defining locations of the desired contents relative to other textual data in the textual streams. The reference does not explicitly disclose a ***schema*** module; however, utilizing opening and extraction modules would have provided similar results as a schema module and therefore, it would have been obvious to include these models for extracting data streams and evaluating the stream against a given schema as taught by Graham's for a well-structured parsing method. Hypertext Transfer Protocol request types were well known in the art at the time the invention was made. The protocol is the underlying transfer protocol used by the World Wide Web regarding document exchange.

Graham does not explicitly disclose disregarding portions of the XML data stream if it the data stream does not conform to the given schema; however, Aoyama discloses an apparatus for structured document difference string extraction. The reference utilizes SGML and HTML to show examples of comparison criterion corresponding to the tags with the contents being stored in a table. Tags having the contents the difference of which is ***ignored at the time of comparison***

(ignoring tags). See column 3, lines 52-67. XML is an extension of SGML and therefore, would have provided a proficient framework for inclusion of similar techniques. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the data stream extraction method of Graham and included the tag ignoring techniques of Aoyama because it would have provided a well-structure framework for proficiently parsing data streams.

In reference to dependent claim 15, Graham discloses:

Graham discloses data structures, which comprise an opening module for textual streams and an extraction module for extracting the desired contents from textual streams. Graham does not teach defining a plurality of schema modules associated with different HTTP request types; however, the extraction module would have provided similar techniques of schemas as both apply rules to retrieve desired contents. See column 2, lines 50-60. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the opening and extraction modules as taught by Graham to include a rule-based schema, because it would have added to the functionality of a desired content extraction method.

In reference to dependent claim 16, Graham discloses:

Graham discloses an extraction module for extracting the desired contents. See column 5, lines 55-67. He does not explicitly disclose determining whether the extraction module resolves whether there are unauthorized elements that appear in a client's request; however, the extraction module of Graham, which was used for removing the desired contents from the textual streams would have been a sufficient module for detecting unauthorized elements appearing in a client's request.

In reference to dependent claim 17, the claim recites similar limitations to claim 14 and is therefore rejected under the same rationale.

In reference to dependent claim 23, the limitation of this claim is the computer program for carrying out the method of claim 14, and is rejected under the same rationale.

In reference to claims 24-27 & 29, the limitations of these claims are the system for carrying out the methods of claims 14-17, and are rejected under the same rationale.

6. Claims 18-22, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham and Aoyama as applied to claim 14 above, and further in view of Fred Dridi & Gustaf Neumann's 'How to implement Web based Groupware Systems based on WebDAV, June 18, 1999, herein after referred to as Dridi.

In reference to claim 18-22, the rejection of independent claim 14 above is incorporated herein. Graham and Aoyama do not teach WebDAV request types. However, Dridi discloses WebDAV as a standard infrastructure for asynchronous collaborative authoring across the Internet in order to turn the Web into a collaborative environment. The core features of WebDAV are metadata management, namespace management, collections, overwrite prevention, version management, and access control. This WebDAV reference does not explicitly disclose using WebDAV methods for use with XML data streams and parsing systems; however, using WebDAV request types with markup languages to provide a coherent set of authoring operations was well known in the art at the time the invention was made. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the well known WebDAV

request types taught by Dridi to form request types associated with XML data streams for a more efficient application environment. See pages 2 & 3.

In reference to dependent claim 28, the claim recites similar limitations to claim 18, and is therefore rejected under the same rationale.

7. Claims 5-9, 32, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh and Aoyama as applied to claim 1 and 30 above, and further in view of Fredj Dridi & Gustaf Neumann's 'How to implement Web based Groupware Systems based on WebDAV, June 18, 1999.

In reference to claim 5, the rejection of independent claim 1 above is incorporated herein. Walsh and Aoyama do not teach WebDAV request types. However, Dridi & Neumann's 'How to implement Web-based Groupware Systems' discloses WebDAV as a standard infrastructure for asynchronous collaborative authoring across the Internet in order to turn the Web into a collaborative environment. The core features of WebDAV are metadata management, namespace management, collections, overwrite prevention, version management, and access control. This WebDAV reference does not disclose using WebDAV methods for use with XML data streams; however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use WebDAV request types with XML data streams and other markup languages to provide a structured set of authoring operations. (See pages 2 & 3).

In reference to claim 6-9, the following claims refer to different WebDAV request types. WebDAV request types encompass the various web extensions previously mentioned in claim 5. The core features of WebDAV are metadata management, namespace management, collections,

overwrite prevention, version management, and access control. It would have been obvious to one of ordinary skill in the art to incorporate PROPFIND, PROPPATCH, SEARCH, LOCK, and UNLOCK requests using WebDAV method to improve the schema modules associated with XML data streams. Thus claims 6-9 are rejected under the same rationale.

In reference to claim 32 & 33, the rejection of independent claim 30 is incorporated herein. Walsh and Aoyama do not teach WebDAV request types. However, Dridi & Neumann's 'How to implement Web-based Groupware Systems' discloses WebDAV as a standard infrastructure for asynchronous collaborative authoring across the Internet in order to turn the Web into a collaborative environment. The core features of WebDAV are metadata management, namespace management, collections, overwrite prevention, version management, and access control. This WebDAV reference does not disclose using WebDAV methods for use with XML data streams and parsing systems; however, using WebDAV request types with XML data streams and other markup languages to provide a coherent set of authoring operations would have been obvious to one of ordinary skill in the art at the time the invention was made. (See pages 2 & 3).

Conclusion

8 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lection et al.	US Patent 6,446,110	filed (4/5/99)
Wanderski et al.	US Patent 6,519,617	filed (4/8/99)

Nazmul Idris, DOM 1.0 – Conformance Testing, June 4, 1999

Ken Sall, XML and Java: XML Parsers in Java, January 12, 1999

Response to Arguments

9. Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new grounds of rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Ludwig whose telephone number is 703-305-8043. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 703-308-5186. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

ML
April 1, 2003

HEATHER R. HERNDON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100